



REVIEW
NOV 30 2000

Sheet 1 of 16
TECH CENTER 1600/290

Form PTO-1449 Modified		Docket No. ISPA-3292	Serial No. 09/486,623
List of Patent and Publications Cited by Applicant (Use several sheets if necessary)		Applicant Peter E. Nielsen, et al.	
U.S. Department of Commerce Patent and Trademark Office		Filing Date July 6, 2000	Group 1631 1270

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

AM	AA	Beran, M., et al., "Substituted ω -(4-Oxo-3,4-Dihydro-5-Pyrimidinyl) Alkanoic Acids, Their Derivatives and Analogues," <i>Collect. Czech. Chem. Commun.</i> , 1983 , 48, 292-298
	AB	Brigotti, M., et. al., "Oligonucleotides Complementary to the α -Sarcin Domain of 28S rRNA Inhibit Cell-free Protein Synthesis", <i>Biochem. Mol. Biol. Int.</i> , 1993 , 31, 897-903
	AC	Chen, H.Z. et al., "Prokaryotic Coupled Transcription-Translation", <i>Methods in Enzymol.</i> , 1983 , 101, 674-690
	AD	Christensen, L., et. al., "Solid-phase Synthesis of Peptide Nucleic Acids", <i>J. Peptide Sci.</i> , 1995 , 3, 175-183
	AE	Cundliffe, E., "Recognition Sites for Antibiotics within rRNA", Chapter 41, <i>The Ribosome</i> , Hill et. al. eds., 1989 , Am. Soc. Microbiol., Washington, D.C., 479-490
	AF	Demidov, V.V. et. al., "Stability of peptide nucleic acids in human serum and cellular extracts", <i>Biochem. Pharmacol.</i> , 1994 , 48, 1309-1313
	AG	Dueholm, K.L. et al., "Peptide Nucleic Acid (PNA) with a Chiral Backbone Based on Alanine", <i>Biorg. Med. Chem. Letts.</i> , 1994 , 4, 1077-1080
	AH	Eckhardt, H. et al., "Blocking of the Initiation of Protein Biosynthesis by a Pentanucleotide Complementary to the 3' End of <i>Escherichia coli</i> 16 S rRNA", <i>J. Biol. Chem.</i> , 1979 , 254, 11185-11188
	AI	Egholm, M. et. al., "Efficient pH-independent sequence-specific DNA binding by pseudoisocytosine-containing bis-PNA", <i>Nucl. Acids Res.</i> , 1995 , 23, 217-222
↓	AJ	Egholm, P.E. et. al., "Sequence-Selective Recognition of DNA by Strand Displacement with a Thymine-Substituted Polyamide", <i>Science</i> , 1991 , 254, 1497-1500
EXAMINER	<i>Andrea Mandel</i>	
	DATE CONSIDERED 9-6-01	



RECEIVED

NOV 30 2000

Sheet 2 of 6
TECH CENTER 1600/2000

Form PTO-1449 Modified

List of Patent and Publications Cited by Applicant (Use several sheets if necessary)	Docket No. ISPA-3292	Serial No. 09/486,623
Applicant Peter E. Nielsen, et al.		
U.S. Department of Commerce Patent and Trademark Office	Filing Date July 6, 2000	Group 1631

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

AM	AK	Egholm, M. et al., "Peptide Nucleic Acids (PNA). Oligonucleotide Analogues with an Achiral Peptide Backbone", <i>J. Am. Chem Soc.</i> , 1992 , <i>114</i> , 1895-1897
	AL	Egholm, M. et al., "Recognition of Guanine and Adenine in DNA by Cytosine and Thymine Containing Peptide Nucleic Acids (PNA)", <i>J. Am. Chem Soc.</i> , 1992 , <i>114</i> , 9677-9678
	AM	Egholm, M. et al., "Peptide Nucleic Acids containing Adenine or Guanine recognize Thymine and Cytosine in Complementary DNA Sequences", <i>J. Chem. Soc. Chem. Comm.</i> , 1993 , 800-801
	AN	Egholm, M. et al., "PNA hybridizes to complementary oligonucleotides obeying the Watson-Crick hydrogen bonding rules", <i>Nature</i> , 1993 , <i>365</i> , 566-568
	AO	Ellman, J. et. al., "Biosynthetic Method for Introducing Unnatural Amino Acids Site-Specifically into Proteins", <i>Methods in Enzymol.</i> , 1991 , <i>202</i> , 301-337
	AP	Engberg, J., et al., "Structural Map of 23S rRNA," Chapter 11, <i>The Ribosome</i> , Hill, et al. (eds.), 1989 , <i>Am. Soc. Microbiol.</i> , Washington, D.C. 168-179
	AQ	Fissekis, J.D. et al., "Synthesis of 5-Carboxymethyluridine. A Nucleoside from Transfer Ribonucleic Acid", <i>Biochem.</i> , 1970 , <i>9</i> , 3136-3142
	AR	Hanvey, J.C. et al., "Antisense and Antigene Properties of Peptide Nucleic Acids", <i>Science</i> , 1992 , <i>258</i> , 1481-1485
	AS	Helene, C. et al., "Specific regulation of gene expression by antisense, sense, and antigene nucleic acids", <i>Biochimica et Biophysica Acta</i> , 1990 , <i>1049</i> , 99-125
↓	AT	Hill, W.E., "Probing Ribosome Structure and Function by Using Short Complementary DNA Oligomers", Chapter 18, <i>The Ribosome</i> , Hill et. al. eds., 1989 , <i>Am. Soc. Microbiol.</i> , Washington, D.C., 253-261

EXAMINER *Andrea Massad*DATE CONSIDERED *9-6-01*



RECEIVED

NOV 30 2010

Sheet 3 of 6

TECH CENTER 1600/2900

Form PTO-1449 Modified

Docket No.
ISPA-3292

Serial No.
09/486,623

List of Patent and Publications
Cited by Applicant
(Use several sheets if necessary)

Applicant
Peter E. Nielsen, et al.

U.S. Department of Commerce
Patent and Trademark Office

Filing Date
July 6, 2000

Group
1631

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

<i>AM</i>	AU	Hyrrup, B., et al., "Modification of the Binding Affinity of Peptide Nucleic Acids (PNA). PNA with Extended Backbones consisting of 2-Aminoethyl-β-alanine or 3-Aminopropylglycine Units," <i>J. Chem. Soc. Chem. Commun.</i> , 1993 , 518-519
	AV	Impacts of Antibiotic-Resistant Bacteria, September 1995 , OTA-H-629, GPO stock #052-003-001446-7, pages 1-8
	AW	Jarayaraman, K., et al., "Selective inhibition of Escherichia coli protein synthesis and growth by nonionic oligonucleotides complementary of the 3' end of 16S rRNA," <i>Proc. Natl. Acad. Sci.</i> , 1981 , 78, 1537-1541
	AX	Kingman, S., "Resistance a European Problem, Too", <i>Science</i> , 1994 , 264, 363-365
	AY	Knudsen, H. et al., "Antisense Properties of duplex-and triplex-forming PNA", <i>Nucl. Acids Res.</i> , 1996 , 24, 494-500
	AZ	Kobayashi, S. et. al., "Simple Assay of β-Lactamase with Agar Medium Containing a Chromogenic Cephalosporin, Pyridinium-2Azo-p-Dimethylaniline Chromophore (PADAC)", <i>Antimicrob. Agents Chemotherapy</i> , 1988 , 32, 1040-1045
*	BA	Korobkova, E.S., et. al., <i>Mikrobiol. Z.</i> , 1995 , 57, 30-36
	BB	Lagriffoul, P.H. et. al., "The Synthesis, Co-Oligomerization and Hybridization of a Thymine-Thymine Heterodimer Containing PNA", <i>Bioorg. Med. & Chem. Letts.</i> , 1994 , 4, 1081-1082
	BC	Meyer, H.A. et. al., "Effects of antisense DNA against the α-sarcin stem-loop structure of the ribosomal 23S rRNA", <i>Nucl. Acids Res.</i> , 1996 , 24, 3996-4002
↓	BD	Miller, J.H., "Assay of β-Galactosidase", <i>Experiments in Molecular Genetics</i> , 1972 , Cold Spring Harbor, New York, 352-355

EXAMINER *Adri Manley*

DATE CONSIDERED *9-6-01*

* Reference BA which is in the Russian language is believed to relate to oligodeoxyribonucleotides complementary to the 3' terminal segment of the 16s-rRNA in molecules which have shown suppression of translation in their ribosomes in an in-vitro assay.



RECEIVED

NOV 30 2000

Sheet 4 of 6
TECH CENTER 1600/2900

Form PTO-1449 Modified			Docket No. ISPA-3292	Serial No. 09/486,623
List of Patent and Publications Cited by Applicant (Use several sheets if necessary)			Applicant Peter E. Nielsen, et al.	
U.S. Department of Commerce Patent and Trademark Office			Filing Date July 6, 2000	Group 1631
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)				
<i>AM</i>	BE	Miller, J.H., "Episome Transfers: Direct Selection", <i>Experiments in Molecular Genetics</i> , 1972 , Cold Spring Harbor, New York, 82-85		
	BF	Nielsen, P.E. et al., "Sequence-Selective Recognition of DNA restriction enzyme cleavage by PNA", <i>Nucl. Acids Res.</i> , 1993 , <i>21</i> , 197-200		
	BG	Nielsen, P.E. et al., "Sequence-specific transcription arrest by peptide nucleic acid bound to the DNA template strand", <i>Gene</i> , 1994 , <i>149</i> , 139-145		
	BH	Noller, H.F. et. al., "Unusual Resistance of Peptidyl Transferase to Protein Extraction Procedures", <i>Science</i> , 1992 , <i>256</i> , 1416-1419		
	BI	Norton, J.C. et. al., "Inhibition of human telomerase activity by peptide nucleic acids", <i>Nature Biotechnology</i> , 1996 , <i>14</i> , 615-619		
	BJ	Rahman, M.A. et. al., "Antibacterial Activity and Inhibition of Protein Synthesis in <i>Escherichia coli</i> by antisense DNA Analogs", <i>Antisense Research and Development</i> , 1991 , <i>1</i> , 319-327		
	BK	Sampson, B.A. et al., "Identification and Characterization of a New Gene of <i>Escherichia coli</i> K-12 Involved in Outer Membrane Permeability", <i>Genetics</i> , 1989 , <i>122</i> , 491-501		
	BL	Saxena, S.K. et al., "Microinjected Oligonucleotides Complementary to the α -Sarcin Loop of 28 S RNA Abolish Protein Synthesis in <i>Xenopus</i> Oocytes", <i>J. Biol. Chem.</i> , 1990 , <i>265</i> , 3263-3269		
	BM	Sekiguchi, M. et. al., "Mutants of <i>Escherichia coli</i> Permeable to Actinomycin", <i>Proc. Nat. Acad. Sci.</i> , 1967 , <i>58</i> , 2315-2320		
<i>↓</i>	BN	Sharma, H.W. et al., "The therapeutic potential of antisense oligonucleotides", <i>BioEssays</i> , 1995 , <i>17</i> , 1055-1063		
EXAMINER <i>Sadi Manohar</i>			DATE CONSIDERED <i>9-6-01</i>	

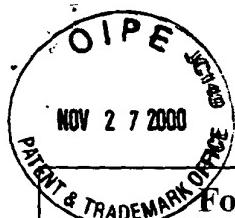
RECEIVED

NOV 30 2000

Sheet 5 of 6

TECH CENTER 1600/2900

NOV 27 2000

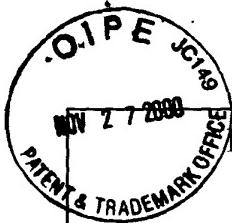


Form PTO-1449 Modified

Docket No. ISPA-3292	Serial No. 09/486,623
Applicant Peter E. Nielsen, et al.	
U.S. Department of Commerce Patent and Trademark Office	Filing Date July 6, 2000 Group 1631 1270

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

AM	BO	Sorensen, M.A. et. al., "Codon Usage Determines Translation Rate in <i>Escherichia coli</i> ", <i>J. Mol. Biol.</i> , 1989 , 207, 365-377
.	BP	Steitz, J.A. et al., "How ribosomes select initiator regions in mRNA: Base pair formation between the 3' terminus of 16S rRNA and the mRNA during initiation of protein synthesis in <i>Escherichia coli</i> ", <i>Proc. Natl. Acad. Sci.</i> , 1975 , 72, 4634-4738
.	BQ	Taniguchi, T. et al., "Inhibition of Q β RNA 70S ribosome initiation complex formation by an oligonucleotide complementary to the 3' terminal region of <i>E. coli</i> 16S ribosomal RNA", <i>Nature</i> , 1978 , 275, 770-772
.	BR	Travis, J., "Reviving the Antibiotic Miracle?", <i>Science</i> , 1994 , 264, 360-362
.	BS	Uhlmann, E. et al., "Antisense Oligonucleotides: A New Therapeutic Principle", <i>Chem. Reviews</i> , 1990 , 90, 544-584
.	BT	Walker, K., et. al., "Inhibition of Protein Synthesis by Anti-5.8S rRNA Oligodeoxyribonucleotides", <i>J. Biol. Chem.</i> , 1990 , 265, 2428-2430
↓	BU	Wren, B.W. et. al., "A PCR-Based Strategy for the Rapid Construction of Defined Bacterial Deletion Mutants", <i>BioTechniques</i> , 1994 , 16, 994-996
EXAMINER <i>Sedim Mansoor</i>	DATE CONSIDERED	9-6-01



RECEIVED

No Sheet 2 of 6